

Each edition of this report has contained new information on the applications of treatment technologies at Superfund sites and has updated the status of existing projects. The information from Records of Decision (ROD) that was deleted or changed in each edition (from the first edition of the report, published in January 1991, through this ninth edition) is listed below to allow tracking of specific projects from edition to edition.

Ninth Edition (April 1999): Additions, Changes, and Deletions from the Eighth Edition (November 1996)

The ninth edition of the report adds information about 42 treatment selected for remedial actions in FY 1996 and FY 1997 RODs, – treatment technologies non-Superfund, and innovative technologies selected for two RCRA corrective actions. Other changes are listed below.

| REGION | SITE NAME, STATE (ROD DATE) | TECHNOLOGY (LISTED IN 8TH EDITION) | 9TH EDITION | | | COMMENTS | CONTACTS/PHONE |
|--------|---|--|-------------|---------|------------|---|---------------------------------|
| | | | ADDED | DELETED | CHANGED TO | | |
| 1 | Beacon Heights Landfill, CT (09/28/90) | Incineration (off site) | | Yes | | At \$20 billion, incineration was considered cost-prohibitive. In addition, the community was concerned about the safety of transporting 22 acres of material by truck over switchback mountain roads. | Elise Jakabhazy 617-573-5760 |
| 1 | Cannon Engineering - Plymouth OU, MA (03/31/88) | Incineration (off site) | | Yes | | About 264 tons of soil contaminated with lead and PCBs were disposed of at the Adams Center Sanitary Landfill in Fort Wayne, Indiana. Incineration was never used. PRP's contractor was allowed to put soil in a landfill without ROD amendment or ESD. | Dan Coughlin 617-573-9621 |
| 1 | Charles George Reclamation Trust Landfill, MA (09/29/88) | Solidification/ stabilization | | Yes | | The contaminated area was capped instead of using solidification/stabilization. The estimated volume of contaminated media had decreased; the technology was no longer effective. | Elaine Stanley 617-223-5515 |
| 1 | Iron Horse Park - OU 1, MA (09/15/88) | Bioremediation (ex situ) - land treatment | | Yes | | Land treatment was changed to asphalt batching off site at a state-permitted soil recycling facility. Bioremediation was taking longer than expected; treatment goals could not be met. An ESD was issued in October 1997. | Don McElroy 617-223-5571 |
| 1 | Salem Acres, MA (03/25/93) | Solidification/ stabilization | | Yes | | Contaminated soils were excavated and hauled from the site instead of using solidification/stabilization. The estimated volume of contaminated media had decreased; the technology was no longer effective. | Elaine Stanley 617-223-5515 |
| 1 | Sullivan's Ledge, MA (06/28/89) | Solidification/ stabilization | | Yes | | Stabilization is no longer part of the remedy. An ESD was issued in 1996 to eliminate that requirement. | Dave Lederer 617-573-9665 |
| 1 | Sullivan's Ledge, MA (09/27/91) | Solidification/ stabilization | | Yes | | Stabilization is no longer part of the remedy. An ESD was issued in 1996 to eliminate that requirement. | Dave Lederer 617-573-9665 |
| 1 | Loring AFB - OU 11, Vehicle Maintenance Building, ME (05/20/96) | Soil vapor extraction | | Yes | | Never implemented. Soils were excavated and connected to the base laundry SVE; soils were put into rolloff containers with PVC pipe. | Mike Nalipinski 617-223-5503 |

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| 1 | O'Connor, ME (09/27/89) | Incineration (off site) | | Yes | | Problems included high cost for implementation of the technology and equipment or site problems. Contaminated soil was landfilled off site. An ESD was issued on 07/11/94. | Ross Gilleland 617-573-5766 |
| 1 | O'Connor, ME (09/27/89) | Solidification/ stabilization | | Yes | | The solidification/ stabilization remedy option provided treatment of lead if incineration was chosen. Incineration was not selected as a remedy. Contaminated soil was landfilled off site. An ESD was issued on 07/11/94. | Ross Gilleland 617-573-5766 |
| 1 | Union Chemical, ME (12/27/90) | Incineration (off site) | | Yes | | Misinterpretation of the ROD. The 1990 ROD selected thermal desorption. That remedy was subsequently changed to SVE in 1994. An ESD was issued in April 1994. See page D-36 for more information. | Terrence Connelly 617-573-9638 |
| 1 | Union Chemical, ME (12/27/90) | Solidification/ stabilization | | Yes | | Misinterpretation of the ROD. The 1990 ROD selected thermal desorption. That remedy was subsequently changed to SVE in 1994. An ESD was issued in April 1994. See page D-36 for more information. | Terrence Connelly 617-573-9638 |
| 1 | Ottati & Goss/Kingston Steel Drum - OU 4, NH (01/16/87) | Incineration (on site) | | | Thermal desorption | A change in cleanup level may be necessary under new risk guidance issued since the ROD was signed. Thermal desorption is more cost effective; the volume of contaminated media had increased. A change in future use from residential to nonresidential would require a ROD amendment. | Richard Goehlert 617-573-5742 |
| 1 | South Municipal Water Supply Wells, NH (09/27/89) | Soil vapor extraction | | Yes | | A second ESD, issued in February 1997, granted a technical impracticability waiver. The waiver eliminated SVE because of the presence of DNAPLs. The SVE system has been shut down. | Roger Duwart 617-573-9628 Tom Andrews (NHDES) 603-271-2910 |
| 1 | South Municipal Water Supply Wells, NH (09/27/89) | In situ air stripping (air sparging) | | Yes | | The air injection well was not installed deep enough to deliver air below the water table. Because of installation of deeper air injection wells would have caused penetration of a confining layer, that activity was not performed. An ESD was issued on 02/03/97. | Roger Duwart 617-573-9628 Tom Andrews (NHDES) 603-271-2910 |
| 1 | Davis Liquid Waste, RI (09/29/87) | Solidification/ stabilization | | Yes | | Solidification/stabilization was proposed in the ROD as a treatment for the residues of incineration, but thermal desorption was used instead of incineration. Therefore, solidification/stabilization was not used. No ROD amendment or ESD was needed. | Neil Handler 617-573-9636 |

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| | | | ADDED | DELETED | CHANGED TO | | |
| 2 | Cosden Chemical Coatings Corp., NJ (09/30/92) | Solidification/ stabilization | | Yes | | The estimated volume of contaminated media had decreased; the technology was no longer effective. An ESD is to be issued in the near future. | Edward Finnerty 212-637-4367 |
| 2 | De Rewal Chemical Co., NJ (09/29/89) | Solidification/ stabilization | | Yes | | The treatability study indicated that leaching inorganics from the solidified mass would increase contamination of the groundwater. An ESD, issued on 06/12/97, eliminates solidification/stabilization and provides for off-site disposal. | Lawrence Granite 212-637-4423 |
| 2 | Ellis Property, NJ (09/30/92) | Incineration (off site) | | | Solidification/ stabilization | Off-site incineration never was used because of high cost; chemical stabilization was used instead. | Richard Ho 212-637-4372 |
| 2 | Kauffman & Minter, NJ (09/27/96) | Incineration (off site) | | Yes | | No hazardous waste has been detected at this OU. The nonhazardous waste currently is being excavated and disposed of with no treatment. Additional characterization currently is being performed. | Paolo Pascetta 212-637-4383 |
| 2 | Reich Farms, NJ (09/30/88) | Incineration (off site) | | Yes | | This was a contingency in the ROD. The ROD specified enhanced volatilization followed by either incineration or on-site disposal. All soil was treated successfully by enhanced volatilization and thus incineration was not necessary. | Jonathan Gorin 212-637-4361 |
| 2 | Renora, Inc., NJ (09/29/87) | None | | | | Original remedy was not listed in the ASR. The 1987 ROD selected bioremediation (in situ) for groundwater. It was cancelled because treatability studies showed bioremediation to be ineffective in treating PAH-contaminated soils. A ROD Amendment signed on 09/30/94 changed the remedy to off-site disposal. | Jonathan Gorin 212-637-4361 |
| 2 | Roebing Steel Co., NJ (03/29/90) | Solidification/ stabilization | | Yes | | Solidification/stabilization was considered and rejected because of the high cost of cleaning up a large area of contamination (10 acres). A ROD amendment is expected in December 1998. | Tamara Rossi 212-637-4368 |
| 2 | Roebing Steel Co., NJ (09/26/91) | Solidification/ stabilization | | Yes | | Solidification/stabilization was considered and rejected because of the high cost of cleaning up a large area of contamination (10 acres). A ROD amendment is expected in December 1998. | Tamara Rossi 212-637-4368 |
| 2 | Swope Oil & Chemical, NJ (09/27/91) | Incineration (off site) | | Yes | | Remedy included only SVE treatment, and no off-site incineration was conducted. Misinterpretation of ROD. | Joseph Gowers 212-637-4413 |

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| 2 | Waldick Aerospace Devices, Inc., NJ (03/29/91) | Incineration (off site) | | Yes | | Misinterpretation of the ROD. Off-site incineration never was implemented. The ROD specified on-site thermal treatment or thermal desorption. | Daniel Weissman 212-637-4384 George Buc (USACE) 908-389-3040 Dave Modricker (USACE) 717-748-4505 |
| 2 | Waldick Aerospace Devices, Inc., NJ (09/29/87) | Solidification/ stabilization | | Yes | | Misinterpretation of the ROD. | Daniel Weissman 212-637-4384 |
| 2 | White Chemical Corp., NJ (09/26/91) | Solidification/ stabilization | | Yes | | Misinterpretation of the ROD. ROD specified that the site should be stabilized, referring to the site stabilization process performed during a previous remedial action. This did not mean treatment using stabilization/solidification. | Betsy Donovan 212-637-4369 |
| 2 | Brookhaven National Laboratory (USDOE) - OU 4, NY (03/25/96) | This is an FY96 ROD that was not listed in the eighth edition. | Soil vapor extraction | | | Soil vapor extraction was added to enhance the existing in situ air stripping system. | Mary Logan 212-637-4321 |
| 2 | Circuitron Corp., NY (03/29/91) | Incineration (off site) | | Yes | | Misinterpretation of the ROD. Soil was excavated and transported to an approved RCRA treatment and disposal facility. Incineration (off site) was selected as the method of treatment to develop a conservative cost estimate. | Sharon Trocher 212-637-3965 |
| 2 | Hooker (102nd Street Landfill), NY (09/26/90) | Incineration (off site) | | Yes | | Original ROD specified incineration of sediments outside slurry wall. Slurry has been repositioned to contain any migration of NAPL plumes. The site will be capped instead. ROD Amendment issued 06/9/95. | Paul Olivo 212-637-4280 |
| 2 | Love Canal - 93rd St. School, NY (09/26/88) | Solidification/ stabilization | | Yes | | Residents did not want any materials treated on site. Materials were disposed of off site instead. A ROD amendment was issued in 05/91. | Damian Duda 212-637-4269 |
| 2 | Marathon Battery Corp., NY (09/30/88) | Solidification/ stabilization | | Yes | | All three solidification/ stabilization projects were conducted as one project, even though three RODs were issued. The work is documented in the ASR as a single project. Therefore, the two other projects have been deleted. | Pam Tames 212-637-4255 |

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| | | | ADDED | DELETED | CHANGED TO | | |
| 2 | Marathon Battery Corp., NY (09/30/89) | Solidification/ stabilization | | Yes | | All three solidification/ stabilization projects were conducted as one project, even though three RODs were issued. The work is documented in the ASR as a single project. Therefore, the two other projects have been deleted. | Pam Tames 212-637-4255 |
| 2 | Mattiace Petrochemicals - OU 1, 5, and 6, NY (06/27/91) | Incineration (off site) | | Yes | | The ROD identified incineration as a possible method of treatment, but incineration was not the selected remedy. | Edward Als 212-637-4272 |
| 2 | Olean Well Field - OU 2, NY (09/30/96) | In situ air stripping (air sparging) | | Yes | | Air sparging was considered for the dry cleaning. A pilot test demonstrated that air sparging was not feasible because of site conditions. Contaminated soil will be excavated instead (a contingency in the ROD, so no ESD or ROD amendment is necessary). | Thomas Taccone 212-637-4281 |
| 2 | Solvent Savers, NY (09/30/90) | Thermal desorption | | | Soil vapor extraction | SVE is being conducted as a pilot study, but thermal desorption may be used in the future. | Lisa Wong 212-637-4267 |
| 3 | Delaware Sand & Gravel Landfill - OU 4 and OU 5, DE (09/30/93) | Soil vapor extraction | | | Bioremediation (in situ) - bioventing | Treating soil with SVE followed by bioventing would not have enhanced the rate of removal of VOCs from soil. Therefore, bioventing was used without SVE. The remedy was a contingency in the ROD. | Eric Newman 215-814-3237 |
| 3 | E.I. DuPont-Newport Site, DE (09/23/93) | None | | | | Original remedy was not listed in the ASR. The 1993 ROD selected solidification/stabilization (in situ). However, the waste was much deeper than originally estimated. Due to the increased volume of waste, the cleanup costs were significantly higher than cited in the 1993 ROD. On 08/16/95 EPA issued an ESD to change the remedy to containment with pump-and-treat for groundwater. | Lisa Brown 215-814-5528 |
| 3 | Halby Chemical Co. - OU 1, Process Plant Area, DE (06/28/91) | Solidification/ stabilization | | | Chemical treatment | Misinterpretation of ROD; in situ chemical oxidation was used. | Eric Newman 215-814-3237 |
| 3 | Aberdeen Proving Ground (Edgewood Area) J-Field Soil OU, MD (09/27/96) | This is an FY96 ROD that was not listed in the eighth edition. | | | Phyto- remediation | Incineration and solidification/stabilization, provided for in the original ROD, was considered dangerous because of the presence of unexploded ordnance. A ROD amendment is to be issued in the near future for a change to phytoremediation. | Steven R. Hirsh 215-566-3352 |

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| 3 | Mid-Atlantic Wood Preservers, MD (12/31/90) | Solidification/ stabilization | | Yes | | The remedy was a contingency in the ROD. Solidification/ stabilization was to be used only if the level of arsenic was above 1000 mg/kg. Results of soil analysis on all samples at the site show levels of arsenic below 1,000 mg/kg. | Eric Newman 215-814-3237 |
| 3 | Aladdin Plating, PA (09/27/88) | Solidification/ stabilization | | Yes | | A vendor demonstration of electrokinetics to treat contami- nated groundwater and soils will continue. A subsequent ROD issued on 12/30/93 requires institutional controls and monitoring, but no solidification/stabilization. | Gregory D. Hamm 215-566-3194 |
| 3 | Berks Sand Pit, PA (09/29/88) | Incineration (off site) | | Yes | | The source of contamination in sediments is being eliminated because of lowering of the water table, eliminating the need for excavation and incineration (off site) of sediments. An ESD has been proposed and will be made final after a public comment period of 30 days. | Bruce Rundell 215-566-3317 |
| 3 | Brown's Battery Breaking Site - OU 2, PA (07/02/92) | Plasma high- temperature recovery | | Yes | | Problems with implementation include high cost and equipment or site problems. | Richard Watman 215-566-3219 |
| 3 | Douglassville Disposal, PA (06/30/89) | Incineration (on site) | | Yes | | Community concerns prohibited the use of the technology. A feasibility study of solidification/stabilization is being conducted. A ROD amendment is expected in FY99. | Victor J. Janosik 215-566-3217 |
| 3 | Drake Chemical - Phase II, PA (05/13/86) | Incineration (on site) | | Yes | | This is a duplicate project. Both the 1986 and the 1988 ROD specified incineration. Incineration (on site) was chosen because of a preference for on-site treatment. The work is documented as a single project. | Gregg Crystall 215-566-3207 |
| 3 | Hebelka Auto Salvage Yard, PA (09/30/91) | Solidification/ stabilization | | Yes | | The 1991 ROD refers to solidification/stabilization of lead- contaminated soils completed under the 1989 ROD, but the 1991 ROD specifies monitoring of groundwater only; no solidification/stabilization of additional sites is specified. | Frederick N. Macmillan 215-814-3201 |
| 3 | M.W. Manufacturing, PA (03/31/89) | Incineration (off site) | | | Solidification/ stabilization and Thermal Desorption | Results of treatability study showed burning fluff caused potential threat due to emissions of dioxin. Thus, offsite incineration was not implemented. ROD Amendment issued 12/22/97 selected ex-situ stabilization and low temperature thermal desorption. | Bhupendra Khona 215-566-3213 |

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| 3 | Publicker Industries, Inc. - OU 3, PA (12/28/95) | Solidification/stabilization | | Yes | | The remedy was a contingency. Wastes were disposed of in a landfill. | Frances Costanzi 215-566-3196 |
| 3 | Greenwood Chemical Co., VA (12/29/89) | Solidification/stabilization | | Yes | | Solidification/stabilization of soils contaminated with arsenic would not have been cost-effective for the small volume of waste present. No ROD amendment or ESD was issued. | Philip Rotstein 215-814-3232 |
| 3 | Rentokil Virginia Wood Preserving, VA (06/22/93) | Incineration (off site) | | Yes | | Cost too high. A value engineering analysis indicated that contaminants in soil could successfully be contained with a slurry wall and cap. A pump and treat system for dewatering could effectively immobilize contaminants. ROD Amendment issued 08/27/96. | Andrew C. Palestini 215-566-3233 |
| 3 | Rentokil Virginia Wood Preserving, VA (06/22/93) | Solidification/stabilization | | Yes | | Cost too high. A value engineering analysis indicated that contaminants in soil could successfully be contained with a slurry wall and cap. A pump and treat system for dewatering could effectively immobilize contaminants. ROD Amendment issued 08/27/96. | Andrew C. Palestini 215-566-3233 |
| 3 | Saunders Supply Co., VA (09/30/91) | Solidification/stabilization | | Yes | | Solidification/stabilization was a contingency that was found to be unnecessary. | Andrew C. Palestini 215-566-3233 |
| 3 | Fike Chemical, Inc. - OU 1, WV (09/29/88) | Solidification/stabilization | | Yes | | Misinterpretation of the ROD. The ROD called for drainage of water and liquid from the lagoon (referred to as "stabilization" in the ROD). Lagoon sludge then was to be sent off site for incineration. | Katherine Lose 215-566-3240 |
| 3 | Fike Chemical, Inc.-WV (03/31/92) | Neutralization | | Yes | | The excavated drums were damaged and were sent off site for disposal. ESD issued 05/13/93. | Katherine Lose 215-566-3240 |
| 3 | Fike Chemical, Inc. - OU 3 - Drum Removal, WV (03/31/92) | Solidification/stabilization | | Yes | | Stabilizing in the ROD referred to stabilizing acidic wastes. The closeout report indicated that all nonhazardous soils were landfilled and hazardous wastes were incinerated. Solidification/stabilization was a contingency remedy. | Katherine Lose 215-566-3240 |
| 4 | Ciba Geigy (McIntosh Plant), AL (07/14/92) | Solidification/stabilization | | Yes | | Solidification/stabilization was not implemented because it would bring about no cost savings. | Charles L. King, Jr. 404-562-8931 |

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| 4 | Ciba Geigy (McIntosh Plant) - OU 3, AL (07/25/95) | Bioremediation (in situ) - other | | | Incineration (on site) | The treatability study was unsuccessful; treatment goals could not be met. Wastes are being incinerated instead. | Charles L. King, Jr. 404-562-8931 |
| 4 | Anodyne, Inc., FL (06/17/93) | Solidification/ stabilization | | Yes | | The amount of contaminated soil was less than anticipated, and the soil was excavated and landfilled off site. | Brad Jackson 404-562-8925 |
| 4 | Brown Wood Preserving, FL (04/8/88) | Solidification/ stabilization | | Yes | | Contingency. This technology in ROD was to be considered only if ex situ biodegradation - land treatment did not attain the desired cleanup levels for the appropriate indicator chemicals within the two-year time period. Goals were met within 18 months. | Rosalind Brown 404-562-8870 |
| 4 | Cecil Field Naval Air Station - OU 2, Sites 5 and 17, FL (06/24/96) | Bioremediation (in situ) - groundwater | | | Air sparging | Bioremediation was begun, but the cleanup goals were revised. A ROD amendment is to be issued soon, and air sparging will be used. | Debbie Vaughn-Wright 404-562-8539 |
| 4 | Cecil Field Naval Air Station - OU 6, Site 11, FL (09/14/94) | Incineration (off site) | | Yes | | Wastes were below LDR standards for treatment. Waste was sent off site to a RCRA subtitle C landfill. | Debbie Vaughn-Wright 404-562-8539 |
| 4 | Cecil Field Naval Air Station - OU 7, FL (07/17/96) | Bioremediation (in situ) - groundwater | | Yes | | SVE and bioremediation were to be implemented in the downgradient area, but concentrations of contaminants have decreased. Therefore, the remedy will not be implemented. | Debbie Vaughn-Wright 404-562-8539 |
| 4 | Cecil Field Naval Air Station - OU 7, FL (07/17/96) | Soil vapor extraction | | Yes | | SVE and bioremediation were to be implemented in the downgradient area, but concentrations of contaminants have decreased. Therefore, the remedy will not be implemented. | Debbie Vaughn-Wright 404-562-8539 |
| 4 | Coleman-Evans Wood Preserving - Amendment, FL (09/26/90) | Solidification/ stabilization | | | Thermal desorption | The 1990 ROD amendment selected a technology train of bioremediation, soil washing and S/S. Treatability studies indicated presence of dioxin, which cannot be treated with bioremediation. So, remedy changed to thermal desorption. ROD Amendment 9/25/97. | Randall Chaffins 404-562-8929 |
| 4 | Gold Coast Oil Corp., FL (09/11/87) | Solidification/ stabilization | | Yes | | The estimated volume of contaminated media had decreased, and the technology was no longer effective. | Brad Jackson 404-562-8925 |

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| 4 | Homestead Air Reserve - OU 6, Site SS-3, FL (06/27/95) | Thermal desorption | | Yes | | Excavation, hauling, and landfilling as a non-RCRA solid waste was less costly, as per the ESD issued on 10/22/97. One 55-gal. drum and 1,350 cu yd of waste were hauled to a non-RCRA landfill. Data in design showed reduced volume of soil. | Patricia Goldberg 404-562-8543 Doyle Brittain 404-562-8549 |
| 4 | Reeves Southeastern Galvanizing - OU 1, FL (10/13/92) | Solidification/stabilization | | Yes | | Implementability (equipment problems and site problems). The PRP could not find a treatment mix that could meet performance standards. An ESD was issued on 04/17/97. | Randall Chaffins 404-562-8929 |
| 4 | Stauffer Chemical Company, FL (12/01/95) | Bioremediation (ex situ) | | | Bioremediation (ex situ)-composting | The change was made to identify a specific type of ex situ bioremediation. | Brad Jackson 404-562-8925 |
| 4 | Whitehouse Oil Pits - Amendment, FL (06/16/92) | Bioremediation (ex situ) - slurry-phase | | Yes | | Treatment goals could not be met. A ROD amendment was to be issued in mid-September 1998, and a public comment period will be conducted. | Mark Fite 404-562-8927 |
| 4 | Marine Corps Logistics Base - OU 3, PSC 16 & 17, GA (08/14/92) | Solidification/stabilization | | Yes | | Misinterpretation of ROD; soil was mixed with clean fill and then disposed of at a permitted landfill. No solidification/stabilization was performed. | Robert Pope 404-562-8506 |
| 4 | Marzone Inc./Chevron Co. - OU 1, GA (09/30/94) | Thermal desorption | | Yes Yes | | Remedy was too costly, the community was opposed to the remedy, and dioxin was discovered. Therefore, the technology was not implemented, and the soil was excavated and disposed of at an off-site landfill. A ROD amendment was issued on 06/18/97. | Annie Godfrey 404-562-8919 |
| 4 | Mathis Brothers Landfill - South Marble Top Road, GA (03/24/93) | Bioremediation (ex situ) - slurry-phase | | | | Excavation, landfilling, and incineration were less costly and required less time. Soils were excavated and transported off site for landfilling if nonhazardous, and incinerated if hazardous. | Charles L. King, Jr. 404-562-8931 |
| 4 | Smith's Farm - OU 1, KY (09/29/89) | Solidification/stabilization | | Yes | | Solidification/stabilization was planned for the heavy metals remaining in the treated soils after the thermal desorption, but the treatment was not necessary. | Antonio DeAngelo 404-562-8826 |
| 4 | Aberdeen Pesticide Dumps (Amendment), NC (09/30/91) | Solidification/stabilization | | | Incineration (off site) | Arsenic is a contaminant at the site. Because the arsenic was commingled with pesticide wastes, all soil contaminated with arsenic was incinerated, and no soil required stabilization. | Kay Crane 404-562-8795 |

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| 4 | Cape Fear Wood Preserving, NC (06/30/89) | Soil washing | | | Thermal desorption | An ESD issued in 1993 changed the remedy from soil washing to thermal desorption. | Jon Bornholm 404-562-8820 |
| 4 | Chemtronics, Inc., NC (040/5/88) | Solidification/ stabilization | | Yes | | The project was canceled during the design phase, and the site was capped. | Jon Bornholm 404-562-8820 |
| 4 | Marine Corps Base, Camp Lejeune - OU 12, Site 3 - The Old Creosote Plant, NC (04/03/97) | Bioremediation (ex situ) - solid-phase | | Yes | | Treatment goals could not be met during treatability testing, and therefore bioremediation (ex situ) – solid-phase will not be implemented. A ROD amendment that specifies disposal of the contaminated soils in an off-site landfill is being prepared. | Gena Townsend 404-562-8538 |
| 4 | Sodyeco - Area C, NC (09/24/87) | Soil vapor extraction | | Yes | | During installation, contaminated drums were encountered, excavated, and removed. Contamination therefore decreased, and SVE no longer was required. | Michael Townsend 404-562-8813 |
| 4 | Geiger (C&M Oil), SC (6/1/87) | Solidification/ stabilization | | Yes | | A ROD amendment was issued on 07/13/93. | Sheri Panabaker 404-562-8810 |
| 4 | Kalama Specialty Chemicals, SC (09/28/93) | Solidification/ stabilization | | Yes | | The amount of contaminated material was less than originally estimated, so it was excavated and disposed of off site. Contingency in ROD. | Steven Sandler 404-562-8818 |
| 4 | Kalama Specialty Chemicals, SC (09/28/93) | Mechanical soil aeration | | Yes | | The amount of contaminated material was less than originally estimated, so it was excavated and disposed of off site. Contingency in ROD. | Steven Sandler 404-562-8818 |
| 4 | Savannah River (TNX Area), SC | In situ air stripping (air sparging) | | Yes | | Problems with implementability (equipment problems, on site problems) arose; development of an air recirculation well was not possible. Areas of low permeability precluded formation of the required recirculation cell. An ESD is to be issued in near the future. | Joao Cardoso-Neto (Bechtel) 803-952-6495 Keith A. Collinsworth (SCDHEC) 803-896-4055 Constance A. Jones 404-562-8551 |

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Ninth Edition (April 1999) (continued)

| REGION | SITE NAME, STATE (ROD DATE) | TECHNOLOGY (LISTED IN 8TH EDITION) | 9TH EDITION | | | COMMENTS | CONTACTS/PHONE |
|--------|---|---|-------------|---------|------------|---|---|
| | | | ADDED | DELETED | CHANGED TO | | |
| 4 | Savannah River (USDOE) - M Area Settling Basin, SC | In situ air stripping (air sparging) | | Yes | | This is a demonstration project, not a full-scale application. | Mike Simmons (DOE) 803-725-1627 Brian Looney (WSRC) 803-725-1627 |
| 4 | Savannah River (USDOE) - OU 1, SC (06/29/92) | Solidification/ stabilization | | Yes | | The work was completed as a RCRA project that is not applicable to the ASR. | Mike Simmons (DOE) 803-725-1627 Brian Looney (WSRC) 803-725-3692 |
| 4 | Amnicola Dump, TN (03/30/89) | Solidification/ stabilization | | Yes | | The volume of soil was much less than had been indicated in the ROD, and it was more cost-effective to dispose of the soil off site. | Robert West 404-562-8806 |
| 4 | Arlington Blending and Packaging Co., TN (06/28/91) | Solidification/ stabilization | | Yes | | The estimated volume of contaminated media has decreased; the technology no longer is effective. An ESD is to be issued in near future. | Derek Matory 404-562-8800 |
| 4 | Wrigley Charcoal, TN (09/30/91) | Incineration (off site) | | Yes | | The technology was too expensive; disposed of off site in a landfill. A ROD amendment was issued on 02/02/95. | Lisa Montalvo 404-562-8805 |
| 4 | Wrigley Charcoal, TN (09/30/91) | Solidification/ stabilization | | Yes | | The technology was too expensive; disposed of off site in a landfill. A ROD amendment was issued on 02/02/95. | Lisa Montalvo 404-562-8805 |
| 5 | Acme Solvent Reclaiming, Inc., IL (12/31/90) | Incineration (off site) | | Yes | | The ROD identifies off-site incineration as a contingency. The technology was never implemented. | David Linnear 312-886-1841 |
| 5 | Belvidere Municipal Landfill - No. 1, IL (06/29/88) | Incineration (off site) | | Yes | | Incineration off site was included in the ROD to be used if the concentration of PCBs was greater than 50 ppm. Because the concentration was not, PCBs were disposed of off site. | William Ballard 312-353-6083 |
| 5 | Byron/Johnson Salvage Yard, IL (03/13/85) | Incineration (off site) | | Yes | | Excavation, hauling, and landfilling were used instead of off- site incineration as indicated in the ROD because of high cost. | Bill Bolen 312-353-6316 |
| 5 | Savanna Army Depot Activity, IL | Solidification/ stabilization | | Yes | | This project is a RCRA closure - state oversight. | David Seely 312-886-7058 |

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|--------|---|---------------------------------------|-------------|---------|--|---|---------------------------------|
| | | | ADDED | DELETED | CHANGED TO | | |
| 5 | Fisher-Calo, IN (08/07/90) | Soil vapor extraction | | | Bioremediation (in situ) - biosparging | Biosparging was determined to be more effective than SVE; no ROD amendment or ESD has been issued. | Jeffrey Gore 312-886-6552 |
| 5 | Main Street Well Field, IN (03/29/91) | Incineration (off site) | | Yes | | Off-site incineration was never implemented at this site. | Deborah Orr 312-886-7576 |
| 5 | Wayne Waste Oil, IN (03/30/90) | Bioremediation (in situ) | | | Bioremediation (in situ) - biosparging | The technology has been reclassified. | Jeffrey Gore 312-886-6552 |
| 5 | Wayne Waste Oil, IN (03/30/90) | Solidification/ stabilization | | Yes | | The technology was determined to be unnecessary. Metals were the only contaminants of concern, and the site had been capped already. Consequently, the risk was minimized. No ROD amendment or ESD was written. | Jeffrey Gore 312-886-6552 |
| 5 | Wedzeb, IN (06/30/89) | Incineration (off site) | | Yes | | 52,000 drums of PCB capacitors were incinerated off site in 1987 at the Apptus facility in Kansas. Soil was excavated and disposed of off site because the contamination remaining in soil was low. No ROD amendment or ESD was issued. | Kenneth Theisen 312-886-1959 |
| 5 | Berlin & Farro Liquid Incinera- tion, MI (02/29/84) | Incineration (off site) | | Yes | | Contingency in the ROD. ROD specified transportation of PCB liquid wastes, if any, to an approved off-site incinerator. | Robert Whippo 312-886-4759 |
| 5 | Burrows Sanitation, MI (09/30/86) | Solidification/ stabilization | | Yes | | The volume of contamination was smaller than originally had been estimated. It was more cost-effective to excavate and dispose of off site under removal authority. | Jeffrey Gore 312-886-6552 |
| 5 | Carter Industries, Inc., MI (09/18/91) | Incineration (off site) | | Yes | | 1991 ROD specified thermal desorption, not incineration off-site. Misinterpretation of ROD. Amended ROD 2/28/95 canceled remedy because the cost for off-site disposal dropped, there was less soil, and restrictions on interstate transport have decreased. | Jon Peterson 312-353-1264 |
| 5 | Clare Water Supply, MI (09/16/92) | Thermal desorption | | Yes | | The remedy should have been listed as SVE. The 1992 ROD specified SVE, not thermal desorption, but SVE was not feasible because of the low permeability of soils. A ROD amendment was issued on 05/15/97. | Jon Peterson 312-353-1264 |

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| 5 | Duell-Gardner Landfill, MI (09/07/93) | Thermal desorption | | Yes | | The volume of contaminated material was much smaller than originally had been estimated. Consequently, it was more cost-effective to excavate and dispose of the material off site. A ROD amendment was to be issued in FY98. | Lolita Hill 312-353-1621 |
| 5 | Electrovoice, MI (06/23/92) | Solidification/ stabilization | | Yes | | Solidification/stabilization was identified as a contingency remedy in the 1992 ROD. If cleanup goals are not achieved by the SVE system, the soils will be excavated and stabilized. The SVE system is in operation and its performance will be reviewed next year. | Karen Sikora 312-886-1843 |
| 5 | Forest Waste Products, MI (03/31/88) | Incineration (off site) | | Yes | | An ESD is to be issued in the near future. | Elizabeth Reiner 312-353-6576 |
| 5 | H. Brown Company, Inc., MI (09/30/92) | Solidification/ stabilization | | Yes | | The site was capped with clay and covered with asphalt so that the property could be redeveloped. Two ROD amendments have been issued. The first, issued on 09/29/95, removed solidification/stabilization from the project. | Timothy Prendiville 312-886-5122 |
| 5 | Thermo-Chem, Inc. - OU 1, MI (09/30/91) | Incineration (off site) | | Yes | | The concentrations of the contaminants in the soil were low and it was not cost-effective to treat the soil with incineration. The metals could not be treated with incineration. The contaminated soil was excavated and disposed of off site. | James Hahnenberg 312-353-4213 |
| 5 | MacGillis and Gibbs/Bell Lumber and Pole - OU 3, MN (09/22/94) | Bioremediation (in situ) - groundwater | | Yes | | The technology is ex situ, not in situ. Groundwater is being pumped and treated above ground. | Darryl Owens 312-886-7089 Miriam Horneff (MPCA) 612-296-7228 |
| 5 | Ritari Post and Pole - OU 1, MN (06/30/94) | Incineration (off site) | | | Bioremediation (ex situ) - land treatment | Incineration was too expensive. | Ted Smith 312-353-6571 John Moeger (MPCA) 612-296-9707 |
| 5 | Ritari Post and Pole - OU 1, MN (06/30/94) | Incineration (off site) | | Yes | | Incineration was too expensive. Chemical oxidation may be used to treat highly contaminated soils, and land treatment will be used for lower concentrations; the use of off site incineration would move the risk outside the site. An ESD is to be issued. | Ramon Torres 312-886-3010 |

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| 5 | Allied Chem & Ironton Coke, OH (12/28/90) | Incineration (on site) | | Yes | | Contaminated soil volume decreased. A ROD amendment was to be issued in May or June 1998. Soil contaminated with soft tar will be excavated, soil that meets the TCLP limit will be recycled for alternative fuel, and soil that fails the TCLP limit will be disposed of at an off-site landfill. | Matthew Mankowski 312-886-1842 |
| 5 | Fields Brook, OH (09/30/86) | None | | | | The original remedy in the 1986 ROD was not listed in the ASR. The 1986 ROD specified solidification of sediments. EPA issued and ESD on 08/15/97 changed solidification to disposal. | Terese Van Donsal 312-353-6564 |
| 5 | Summit National Liquid Disposal Service - Amendment, OH (11/02/90) | Incineration (off site) | | Yes | | The 1988 ROD and the 1990 ROD amendment both specified incineration on site. It is documented as a project under the 1988 ROD. | Anthony Rutter 312-886-8961 |
| 5 | Mid-State Disposal Landfill, WI (09/30/88) | Solidification/ stabilization | | Yes | | Solidification/stabilization was identified as a contingency that was to be used only to solidify the sludge lagoon so that a cap could be placed over it. Solidification/ stabilization was deemed unnecessary. A geomembrane cap was used without solidification/ stabilization. | Mary Tierney 312-886-4785 |
| 5 | Onalaska Municipal Landfill, WI (08/14/90) | Bioremediation (in situ) | | | Bioremediation (in situ) - bioventing | The technology was reclassified from bioremediation in situ to bioventing. | George Mickelson (WIDNR) 608-267-0858 Kevin Adler 312-886-7078 |
| 5 | Spickler Landfill, WI (06/03/92) | Solidification/ stabilization | | Yes | | Results of a test of stabilization/solidification showed that the technology would not provide a significant reduction in the mobility or hydraulic conductivity of mercury wastes. An impermeable cap with synthetic liner was used to eliminate infiltration. | John Fagiolo 312-886-0800 |
| 6 | Gurley Pit, AR (10/06/86) | Incineration (off site) | | Yes | | The cost was too high; transportation and safety problems also arose. | Ernest R. Franke 214-665-8521 |
| 6 | Popile, AR (02/01/93) | Bioremediation (ex situ) | | | Bioremediation (ex situ) - land treatment | The RI data is being reviewed to determine whether there is a more appropriate remedy. The site was capped under a removal action. FS decisions will be made in 1999. | Shawn Ghose 214-665-6782 |

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| 6 | Popile, AR (02/01/93) | Bioremediation (in situ) | | | Bioremediation (in situ) - groundwater | The RI data is being reviewed to determine whether there is a more appropriate remedy. The site was capped under a removal action. FS decisions will be made in 1999. The original remedy had been composting, but the remedy was changed to bioremediation in situ - groundwater. | Shawn Ghose 214-665-6782 |
| 6 | Vertac, Inc., AR (06/30/93) | Incineration (off site) | | Yes | | This project has been consolidated with off-site incineration under the 1993 ROD for OU1. All material specified in that ROD was incinerated off site according to a 1995 ESD. See information under the listing for incineration off site at OU1. | Phillip Allen 214-665-8516 |
| 6 | Vertac, Inc. - Onsite OU 1, AR (05/25/95) | Incineration (on site) | | | Incineration (off site) | An on-site incinerator was present after use for a previous removal action. The PRP and the incinerator operator could not agree on a price, so EPA allowed the PRP to choose to incinerate the soils off site. An ESD was issued on 05/25/95. | Mike Arjmandi (ADPCE) 501-682-0852 Phillip Allen 214-665-8516 |
| 6 | Bayou Bonfouca - Source Control OU (Amendment), LA (07/20/95) | Incineration (off site) | | Yes | | This ROD amendment (07/20/95) actually covered the off-site incineration of waste from the Southern Shipbuilding Corporation site. Therefore, no waste from Bayou Bonfouca was incinerated off site or addressed by this ROD amendment. | Mark Hansen 214-665-7548 |
| 6 | Pab Oil & Chemical Services, Inc., LA (09/22/93) | Bioremediation (ex situ) - other | | | Solidification/ Stabilization | Bioremediation was discontinued because of implementability problems. An ESD was issued on 03/12/1997. | Caroline Ziegler 214-665-2178 |
| 6 | Atchison, Topeka, & Santa Fe Clovis/Santa Fe Lake - TPH lake sediments, NM (09/23/88) | Bioremediation (ex situ) - land treatment | | Yes | | No information available. | Donald H. Williams 214-665-2197 |
| 6 | Oklahoma Refining Co., OK (06/09/92) | Bioremediation (ex situ) - other | | | Bioremediation (ex situ) - land treatment | The type of bioremediation was clarified; there was no actual remedy change. | Kelly Dixon (ODEQ) 405-702-5141 Earl Hendrick 214-665-8519 |

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| 6 | Bailey Waste Disposal, TX (06/28/88) | Solidification/ stabilization | | Yes | | Cost too high; treatment goals could not be met; more contamination than planned. New remedy includes excavation and offsite disposal of problematic wastes and installation of a geocomposite cap over mixed industrial and municipal wastes. ROD Amendment 12/16/96. | Chris Villarreal 214-665-6758 |
| 6 | Brio Refining, TX (03/31/88) | Solidification/ stabilization | | Yes | | Solidification/ stabilization was considered during the RI/FS stages, but was not included in the ROD because it could not meet treatment levels. No ROD Amendment or ESD therefore was necessary. | John Meyer 214-665-6742 |
| 6 | Kelly Air Force Base - Site 1100, Phase II, TX | This phase is an addition to the phase listed in the eighth edition. | Soil vapor extraction | | | No information available. | Bill Hall 210-925-3100 |
| 6 | Kelly Air Force Base - Site 1100, Phase III, TX | This phase is an addition to the phase listed in the eighth edition. | Bioremediation (in situ)- bioventing | | | No information available. | Bill Hall 210-925-3100 |
| 6 | Petro-Chemical Systems, Inc.- OU 2, TX (04/30/98) | This is an FY98 ROD that was not listed in the eighth edition. | Thermal desorption | | | | Chris Villarreal 214-665-6758 |
| 6 | Petrochemical (Turtle-Bayou), TX (09/06/91) | Incineration (off site) | | | Soil vapor extraction | Misinterpretation of ROD. SVE currently is being used to remediate four soil areas at the site. | Chris Villarreal 214-665-6758 |
| 6 | Sheridan Disposal Services, TX (12/29/88) | Solidification/ stabilization | | Yes | | Misinterpretation of the ROD. | Gary A. Baumgarten 214-665-6749 |
| 6 | South Cavalcade Street, TX (09/26/88) | Incineration (off site) | | Yes | | The 09/26/88 ROD listed incineration (off site) for sludges, if encountered. However, no sludges were not found and therefore incineration was not performed. | Glenn Celerier 214-665-8523 |
| 6 | South Cavalcade Street, TX (09/26/88) | Soil washing | | Yes | | A pilot study of soil washing showed that 40 percent of the volume could not be washed to meet goals. Soils contaminated with carcinogenic PAHs at levels higher than 700 ppm will be sealed and contained beneath a six-inch-thick reinforced concrete cap. A ROD amendment was issued on 06/27/97. | Glenn Celerier 214-665-8523 |

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| 6 | South Cavalcade Street, TX (09/26/88) | Flushing (in situ) | | Yes | | Estimated volume of contaminated soil much less than anticipated, but treatment goals could not be reached anyway. Will cap the site instead. ROD Amendment issued 6/27/97. | Glenn Celerier 214-665-8523 |
| 7 | Midwest Manufacturing/North Farm (Amendment), IA (09/30/93) | Solidification/ stabilization | | Yes | | The cost was too high; contaminant levels for both OUs were lower than before. Site risks were evaluated to determine that monitoring with institutional controls would effectively address the contamination at both OUs. The original ROD was issued in 1988. | Diane Easley 913-551-7797 |
| 7 | Strother Field Industrial Park, KS (03/31/94) | Soil vapor extraction | | Yes | | The application of SVE technology is impractical at this site because the soil permeability is too low. The remedy proposed in the ESD is a pump-and-treat system with monitored natural attenuation. An ESD was to be issued by 09/30/98. | Paul Roemerman 913-551-7694 |
| 7 | Ellisville Site - Bliss, MO (09/29/86) | Incineration (off site) | | | | The 1986 ROD called for interim storage of contaminated soil on site and incineration at an off-site commercial facility. The 1991 ROD called for off-site incineration at the Times Beach, MO site operated by the PRPs. A ROD amendment was issued on 09/30/91. | Robert Feilds 913-551-7697 |
| 7 | Missouri Electric Works, MO (09/28/90) | Incineration (on site) | | | Thermal desorption | On-site incineration was too expensive. A ROD amendment was issued in September 1995. | Pauletta France-Isetts 913-551-7701 |
| 7 | Shenandoah Stables, MO (09/28/90) | Solidification/ stabilization | | Yes | | Misinterpretation of the ROD. | Robert Feild 913-551-7697 |
| 8 | Broderick Wood Products, CO (03/24/92) | Bioremediation (in situ) - groundwater | | | Bioremediation (in situ) - bioventing | The remedy was changed to bioventing in the ESD issued on 03/24/95. The pump-and-treat system did not work with LNAPLs; therefore, the cost of implementing it would be high. | Armando Saenz 303-312-6559 |
| 8 | Fort Carson - Building 9648 OU, CO | Bioremediation (in situ) - other | | | Bioremediation (in situ) - bioventing | The technology was reclassified. | John Cloonan 719-526-8004 |
| 8 | Lockheed/Martin - W C Astronautics Facility, CO (09/24/90) | Soil vapor extraction | | | Thermal desorption | SVE will not be used. All soil will be excavated and treated by thermal desorption. Doing so will allow the site owner to reduce risk, eliminate the need for post-closure care, and clean-close the unit. | George Dancik 303-312-6206 Charles Johnson (CDPHE) 303-692-3348 |

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| 8 | Rocky Mountain Arsenal - OU 17, CO (05/14/90) | Solidification/ stabilization | | Yes | | The ROD was misinterpreted. | Laura Williams 303-312-6660 |
| 8 | Rocky Mountain Arsenal - OU 28, CO (01/15/93) | Solidification/ stabilization | | Yes | | OU 28 was the evaluation of alternatives for treatment of various future waste streams at RMA. Solidification/ stabilization was considered, but no actions were taken under OU 28. | Laura Williams 303-312-6660 |
| 8 | Rocky Mountain Arsenal - OU 29, CO (01/15/93) | Incineration (off site) | | Yes | | OU 29 was an interim remedial action to address PCB wastes. Both off-site incineration and off-site landfilling were selected as the most preferable alternatives for disposal of PCB wastes. The PCB wastes were ultimately disposed of by landfilling. | Laura Williams 303-312-6660 |
| 8 | Sand Creek Industrial, CO (09/28/90) | Incineration (off site) | | Yes | | No information is available. | Erna Waterman 303-312-6762 |
| 8 | Summitville Mine - OU 0, CO (12/15/94) | Neutralization | | Yes | | The ROD was misinterpreted. | Victor Ketallappet 303-312-6528 |
| 8 | Burlington Northern (Somers Plant) - Soil, Base - OU 4, UT (06/14/94) | Bioremediation (in situ) - other | | Yes | | The ROD was misinterpreted. | James C. Harris 406-441-1150 |
| 8 | Montana Pole and Treating Plant - Soil OU, MT (09/21/93) | Bioremediation (in situ) - other | | Yes | | The ROD was misinterpreted. | James C. Harris 406-441-1150 Neil Marsh (MT) 406-444-1420 |
| 8 | Silver Bow Creek/Butte Area - Rocker Timber Framing and Treatment Plant OU, MT (06/30/92) | Solidification/ stabilization | | Yes | | Solidification/stabilization treatment was recommended only if chemical treatment was not successful. The estimated volume of contaminated media had decreased; the technology was no longer effective. | Mike Bishop 406-441-1150 |
| 8 | Ellsworth AFB - Abandoned Fire Protection Area, SD (05/10/96) | Soil vapor extraction | | Yes | | The FY96 ROD only expanded the dual phase system from the FY95 ROD, but did not add any technologies. | Peter Ismert 303-312-6665 |

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| 8 | Hill Air Force Base - OU 4, UT (06/14/94) | Soil vapor extraction | | Yes | | The bottom half of the landfill is below the water table, and the landfill does not have a slurry wall to divert groundwater flow from it. Therefore, SVE technology could not be implemented. A series of 3 trenches collects leachate from the landfill. | Dr. Dan Atkins (DoD) 801-775-2559 Rob Stites 303-312-6664 |
| 8 | Utah Power & Light/American Barrel, UT (07/07/93) | Incineration (off site) | | Yes | | Off-site incineration was specified as a contingent remedy but never was implemented. | Paula Schmittiel 303-312-6861 |
| 9 | Fairchild Semiconductor (Mt. View) - Bldg 1-4 (515 & 545 N. Whisman Rd./313 Fairchild Dr.), CA (06/30/89) | Soil vapor extraction | | Yes | | The water table rose and is now too high for SVE to be effective. A pump-and- treat system currently is being used. No ROD amendment or ESD was issued. | Dennis Curran Smith Env. Tech. Corp. 415-960-1640 Eugenia Chow 415-744-2258 |
| 9 | FMC Corp. (Fresno Plant), CA (06/28/91) | Solidification/ stabilization | | Yes | | Removed from proposed NPL listing. | Cynthia Wetmore 415-744-2234 |
| 9 | Intel, Mountain View, CA (06/09/89) | Mechanical soil aeration | | Yes | | Soil was excavated and shipped off site. | Eugenia Chow 418-744-2258 |
| 9 | J.H. Baxter, CA (09/27/90) | Bioremediation (ex situ) - land treatment | | | Bioremediation (in situ) - bioventing | Ex situ bioremediation was replaced with in situ bioremediation. Landfarming may be used; biomass culture was added to contaminated soil. ESD issued 3/27/98. | Kathy Setian 415-744-2254 Beatriz Bofill 415-744-2235 |
| 9 | Koppers (Oroville Plant), CA (09/13/89) | Solidification/ stabilization | | Yes | | Treatment goals could not be met. The concentrations of dioxins were sufficiently high that solidification/ stabilization was not feasible. A ROD amendment was issued on 08/29/96. | Charles Berrey 415-744-2223 |
| 9 | March AFB - OU 1, Area 5 & Site 4, CA (06/20/96) | Bioremediation (in situ) - bioventing | | Yes | | No information available. | Richard Russell 415-744-2406 |
| 9 | March AFB - OU 1, Area 5 & Site 4, CA (06/20/96) | Thermal desorption | | | | No information available. | Richard Russell 415-744-2406 |

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| | | | ADDED | DELETED | CHANGED TO | | |
| 9 | Mather AFB - Soil and Groundwater OU/Smaller UST Sites, CA | Bioremediation (in situ) | | | Bioremediation (in situ) - bioventing | The technology was reclassified from bioremediation in situ to bioventing. | Kathleen Salyer 415-744-2214 Terry Winsor (Montgomery Watson) 916-231-4430 |
| 9 | McColl, CA (06/30/93) | Solidification/stabilization | | Yes | | Technology had implementation problems. EPA selected the contingency remedy of RCRA-equivalent closure for the sump wastes. Pilot and full-scale treatability studies were conducted during 1994 and 1995 to determine the feasibility of solidification/stabilization. | Patti Collins 415-744-2229 |
| 9 | Purity Oil Sales, Inc., CA (09/26/89) | Solidification/stabilization | | Yes | | The reason for deletion of the technology is unknown. An ESD was issued in 1995, and capping was performed at the site. | Rosemarie Caraway 415-744-2231 |
| 9 | Raytheon, Mountain View, CA (06/09/89) | Mechanical soil aeration | | Yes | | Soil was excavated and shipped off site for disposal. | Eugenia Chow 415-244-2258 |
| 9 | Roseville Drums, CA (03/03/88) | Bioremediation (in situ) | | Yes | Bioremediation (in situ) - bioventing | The technology was reclassified from bioremediation in situ to bioventing. | Bradley Shipley 415-744-2287 |
| 9 | Sacramento Army Depot, CA (01/17/95) | Solidification/stabilization | | Yes | | The 1995 ROD was a base-wide ROD. It reiterated the S/S remedy specified in the 3/29/93 ROD. It did not add another S/S project. Hence there is only one S/S project at SAD. | Marlon Mezquita 415-744-1499 |
| 9 | Southern California Edison, Visalia Pole Yard, CA (06/10/94) | Bioremediation (in situ) - groundwater | | | Thermally enhanced recovery | The remedy was implemented as a contingency. The remedy is actually "dynamic underground stripping." Treatment goals could not be met because concentrations were too high for bioremediation to work in a timely manner. | Richard Procunier 415-744-2219 Emmanuel Mensall (CADTSC) 916-255-3704 |
| 9 | Southern California Edison, Visalia Pole Yard - Groundwater OU, CA (06/10/94) | Bioremediation (in situ) - groundwater | | Yes | | The remedy implemented was a contingency. Concentrations were too high. Bioremediation could not achieve cleanup levels in a realistic time frame. | Richard Procunier 415-744-2219 Emmanuel Mensall (CADTSC) 916-255-3704 |

Information on the date and issuance of Explanations of Significant Differences (ESDs) and ROD Amendments is not complete.

Ninth Edition (April 1999) (continued)

| REGION | SITE NAME, STATE (ROD DATE) | TECHNOLOGY (LISTED IN 8TH EDITION) | 9TH EDITION | | | COMMENTS | CONTACTS/PHONE |
|--------|--|---------------------------------------|-------------|---------|--|---|--|
| | | | ADDED | DELETED | CHANGED TO | | |
| 9 | Valley Wood Preserving, Inc., CA (09/27/91) | Solidification/ stabilization | | Yes | | The estimated volume of contaminated media had decreased; the technology was no longer effective. A ROD amendment is to be issued in near future. | Michelle Lau 415-744-2227 |
| 10 | FAA Northway Station, AK | Bioremediation (in situ) | | | Bioremediation (in situ) - groundwater | The technology was reclassified. | Daniel McKay 603-646-4738 |
| 10 | FAA Strawberry Point Station, AK | Bioremediation (in situ) | | | Bioremediation (in situ) - biosparging | The technology was reclassified. | Daniel McKay 603-646-4738 |
| 10 | Fort Wainwright - OU 1 - Chemical Agent Dump Site, AK (07/20/95) | Neutralization | | Yes | | Non-invasive geophysical investigations indicated the presence of buried chemical agents. However, when excavation was completed, the agents were undetectable. | David Williams (USACE) 907-753-5657 Dianne Soderlund 907-271-3425 |
| 10 | U.S. DOE Idaho National Engineering and Environmental Lab - OU 23, ID | Solidification/ stabilization | | | Vitrification | Solidification/stabilization was never used at the site. | Terrell Smith Lockheed Marietta GW Restoration Dept. 208-526-5692 Wayne Pierre 206-553-7261 |
| 10 | McCormick and Baxter Creosoting Company (Portland Plant), OR (03/29/96) | Solidification/ stabilization | | Yes | | Treatment goals could not be met. Decided to dispose offsite. The excavated soil contaminated with F-listed waste will be disposed offsite at a landfill. ROD Amendment to be issued in 1998. | Alan Goodman 503-326-3685 |
| 10 | Union Pacific Railroad Tire Treatment, OR (03/27/96) | Bioremediation (in situ) | | | Bioremediation (in situ) - bioventing | Reclassified technology. | Brian McClure (ORDEQ) 541-298-7255 Alan Goodman 503-326-3685 |
| 10 | American Crossarm & Conduit, WA (06/30/93) | Solidification/ stabilization | | Yes | | Excavated and transported contaminated soil to a landfill in Arlington, OR. Flyash was added to absorb moisture. ROD called for the material to be solidified off site. | Lee Marshall 206-553-2723 |

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Ninth Edition (April 1999) (continued)

| REGION | SITE NAME, STATE (ROD DATE) | TECHNOLOGY (LISTED IN 8TH EDITION) | 9TH EDITION | | | COMMENTS | CONTACTS/PHONE |
|--------|---|---|----------------------------------|---------|------------|---|----------------------------------|
| | | | ADDED | DELETED | CHANGED TO | | |
| 10 | Commencement Bay, South Tacoma Field, WA (09/29/94) | Soil vapor extraction | | Yes | | The plume was smaller than had been estimated; contamination levels have decreased. SVE was discussed as an option but never implemented. | Cami Grandinetti 206-553-8696 |
| 10 | Commencement Bay, South Tacoma Field, WA (09/29/94) | In situ air stripping (air sparging) | | Yes | | The plume smaller than had been estimated; contamination levels have decreased. Air sparging was never implemented, and no ROD amendment or ESD was issued. | Cami Grandinetti 206-553-8696 |
| 10 | Harbor Island (Lead), WA (09/30/93) | Incineration (off site) | | Yes | | Contaminated soil was disposed of at a hazardous waste disposal facility. The technology was a contingency in the ROD. | Keith A. Rose 206-553-7721 |
| 10 | Queen City Farms, WA (10/24/85) | None | Solidification/ Stabilization | | | This remedy was not listed in the ASR. | Neil Thompson 206-553-7177 |
| 10 | Western Processing Co., Inc., WA | Thermal desorption | | Yes | | Contaminated soil was excavated and transported off site to a landfill in Arlington, OR. The remedy was contingent and never implemented. | Lee Marshall 206-553-2723 |
| 10 | Western Processing Co., Inc. - ESD, WA (12/11/95) | Bioremediation (in situ) - other | | Yes | | Natural attenuation already was occurring at site. Bioremediation would not enhance the degradation of contaminants. An ESD will be issued to note the change. | Lee Marshall 206-553-2723 |
| 10 | Western Processing Co., Inc. - Phase I, WA (08/05/84) | Incineration (off site) | | Yes | | Contaminated soil was excavated and disposed of off site. Incineration was not required. The specified remedy in the ROD was off-site disposal or incineration, so no amendment or ESD was required. | Lee Marshall 206-553-2723 |
| 10 | Western Processing Co., Inc. - Phase II, WA (09/25/85) | Solidification/ stabilization | | Yes | | The technology never was specified in the ROD as the preferred remedy and therefore never was used at the site. Flyash was added to the soil to absorb moisture for easy transportation. The soil was excavated and disposed of off site. | Lee Marshall 206-553-2723 |

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